Scottish Borders Pension Fund

Early Retirement Strain Cost Factors

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Douglas Green FFA

Fellow of the Institute and Faculty of Actuaries
For and on behalf of Hymans Robertson LLP

Contents

Executive Summary

- This paper has been requested by, and is addressed to, Scottish Borders Council in its capacity as Administering Authority of the Scottish Borders Pension Fund ("the Fund"). The purpose of the paper is to advise replacement early retirement strain cost factors for use by the Fund.

- The Fund needs strain cost factors to determine the added cash which an employer must pay whenever a member takes early retirement on unreduced benefits. These benefits cost the Fund more than it had been expecting, so the employer must pay the additional cost.

- **We recommend that the current Fund factors are replaced by those shown in Appendix 1 and the associated spreadsheet. The Fund should consider the exact method and timing of implementing the new factors, as outlined under "Implementation" below.** There are important impacts from the use of new factors, such as testing, timing and impact on any ill-health insurance premiums (and commission).

- The current Fund factors have been compared to those we believe are in place currently: this shows that the current factors materially overstate the strain cost in most circumstances, and therefore **adopting the new factors will generally give rise to lower strain costs required from employers**.

- This advice should be reviewed at the next formal actuarial valuation, or if the funding basis is materially altered, whichever occurs first.

Background

At the triennial valuation, the actuary calculates the estimated cost of providing benefits to members, over and above the member contributions and expected investment returns. This estimated cost is then charged to employers as their required regular contributions. In valuing the benefits, the actuary generally assumes that active members will start taking benefits around the earliest date they are able to do so in full, the "Normal Pension Age" or NPA.

LGPS Regulations determine the NPA for different tranches of benefit for a given member, and the employer contributions are based on that data. If a member was to take early retirement on unreduced benefits before NPA then an added cost arises for the Fund: this is due to:

- The longer expected payment period: the member's expected age at death is unchanged, but the start date of payments is earlier;

- The missing investment returns which the Fund would have expected on those assets if they hadn't been needed for early retirement benefit payments, but had remained invested until NPA instead (NB this is partly offset by the expected future salary and CPI growth which would have increased the benefits).

There are a number of approaches to calculating this added cost:

A. The true cost of any given early retirement can only be known at the death of the member. At that point the Fund could exactly determine the benefit payments actually made, and their excess over those which would have been made from NPA, together with investment returns.

Other approaches can therefore only be estimates of the true cost:

B. The cost as estimated at the next accounting disclosure (under FRS102 or IAS19), which will use different assumptions from those used for funding.

C. The cost as estimated at the next funding valuation, which will use different assumptions from those used for accounting.

D. The estimated immediate cost payable by the employer is calculated using factors, typically derived using a simplified calculation methodology as outlined below. This methodology is adopted to be easily incorporated within the Fund's administration software. This paper considers these factors, as an approximate estimate of the true cost as per A above, in order to have the bulk of the anticipated added cost being paid into the Fund in the short term.

It is almost inevitable, given the inherent approximations, that the factors will give rise to added contributions which prove, at the next valuation, to be lower or higher than the calculated costs at that time. The difference will therefore affect the employer's deficit position at the next valuation date, so that the required balancing contributions are collected in the longer term. However, the use of these factors is a pragmatic approach to ensure that a significant part of the cost is collected from the member's employer at the time of early retirement.

The factors methodology (Approach D)

The Fund needs some ready way to calculate the added cost arising from each early retirement, so that the employer concerned can be billed appropriately at the time of the retirement. In practice this is calculated by the pensions administrator using Early Retirement Strain Cost Factors. These factors are determined by each fund and are not mandated by the Regulations or the Government Actuary's Department.

The factors we understand are currently used by the Fund are attached as Appendix 1 to this paper, and were introduced in 1998. We understand these to be the 1998 ACA Factors with a loading of 125% applied to the Annuity Factors.

In essence the strain cost is calculated as:

{Unreduced pension} x {ERR factor} x {Annuity Factor at ERA}

where:

- ERR factor = the Early Retirement Reduction factor which would have applied to the member's pension had the retirement not been with employer consent.

- Annuity Factor at ERA = the cost of paying a pension of £1 p.a. (plus future increases in payment) for the remainder of the member's expected lifetime from their Early Retirement Age.

Assumptions underlying proposed new Factors

From the above, we would therefore propose that the Fund adopts new factors where the underlying assumptions reflect those used at the most recent formal funding valuation. The rationale for these assumptions is that the strain costs are a funding cost for the employer and should therefore use the same assumptions as underpinning the most recent formal funding valuation.

We understand that the administration software only permits a single table of factors to be used for all Fund members, which in turn implies the use of a single set of assumptions. However at the 31 March 2020 formal funding valuation we measured funding positions using different assumed investment returns (as at the valuation date) for different types of employer. In the interests of pragmatism, we have proposed an assumed investment return below which relates (at the valuation date) to the employers of the majority of Fund members, on the long term funding target (as opposed to contractor or cessation funding targets).

The use of the lower assumed investment return in these alternative funding targets would, all other things being equal, give rise to lower strain cost calculations. We would therefore expect that strain costs calculated for employers on contractor or cessation funding targets are more likely to be higher than strictly necessary, thus giving rise to funding gains at the next funding valuation. However we consider this to be acceptable, partly on the grounds of administrative simplicity (we only expect a small minority of early retirements to take place among such employers) and partly as these employers are heading to a cessation event at which any surplus will be returned to them at that time.

We have therefore used the following principal assumptions:

- Assumed investment return = 3.8% p.a.

- Pay growth rate = 2.6% p.a.

- Pension increase rate = 1.9% p.a.

- Life expectancy as per whole Fund averages.

Derivation of these assumptions is detailed in the March 2020 formal valuation report.

In determining the ERR factors we have had to make the following simplified assumptions:

- Member's NPA = 62. This is because the ERR factor will differ whether (for example) the member is retiring 5 years early at age 55 with an NPA of 60, vs retiring at age 60 with an NPA of 65. The administration software does not allow this distinction, it uses the same factor for a given number of years early, regardless of NPA, so we have chosen 62 as a suitable average across LGPS active members.

- As the administration system only permits one ERR factor regardless of gender, we have taken the average of male and female factors.

Note that another simplification is due to the application of a pay growth assumption for all pension, (rather than allowing for CPI for the post-2015 element). We have used this simplification because:

- The post-2015 element will typically be relatively small, for members retiring in the near future;

- The higher strain costs will generally occur where the member has much longer service, in which case the salary-related pre-2015 element will be a larger element of the total anyway;

- We consider this an acceptable approximation in the context of other simplifications applied in this calculation, as identified above;

- The calculated strain cost is only ever an interim payment requested from the employer, so any difference from the cost calculated at the next valuation (as per approach C above) will be picked up in employer contributions at that stage.

The resulting factors are shown in Appendix 1.

Impact of proposed assumptions

We have proposed the above assumptions as they are in line with the assumptions underpinning the majority of employer funding strategies as at the last valuation.

If different assumptions were to be adopted for these factors, then there would be a disconnect between the measurement of the required strain payment, and the measurement of the existing funding reserve immediately prior to early retirement.

It is not possible to state whether a more or less prudent set of assumptions for these factors would give rise to higher or lower strain payments, since different assumptions affect different parts of the strain cost calculation in different ways. For instance, a lower real assumed investment return would give a lower ERR factor but a higher Annuity Factor, and the overall impact would vary by age and term to NPA.

However, we can state that:

- Higher calculated strain costs will, all other things being equal, mean a lower likelihood that a further deficit arises at the future valuations, and a higher likelihood that the strain payment will prove to be overly sufficient (and vice versa);

- Changes to market conditions and to future valuation assumptions will mean that the strain cost factors will become more or less likely to meet the true cost and future funding and accounting requirements. For the reasons stated above it is not possible to state simply that a given change will give rise to a greater or smaller likelihood of the strain payment proving to be sufficient.

Comparison between existing and proposed factors

We have calculated the strain cost which would apply for a variety of notional members, of different ages, gender and term to retirement, and compared the results using the Fund's existing factors vs the proposed set (both as shown in Appendix 1).

This shows that the proposed factors give a decrease in strain costs averaging around 5% when compared to the existing factors. This is due to:

- a likely lower post-retirement assumed real investment return above CPI pension increases and an increased likely assumed longevity assumption (both giving rise to higher annuity factors)

  being more than offset by;

- a likely lower pre-retirement assumed real investment return above pay growth (which gives a lower ERR factor) alongside the removal of the 25% loading.

Implementation

a) **Factors**: The proposed factors are shown in Appendix 1, for the principal ages and numbers of year early which will tend to arise in practice. However, alongside this paper we have provided a spreadsheet which contains these factors in a format easier to upload to your administration system, and also applicable for all possible ages and number of years early.

b) **Use of factors**: The factors should be used in the manner outlined in the Instruction Manual we issued to the Fund on the same date as this paper. This paper should therefore be read in conjunction with that Manual, for the purpose of applying the new factors in practice. If the Fund or any employers use these factors in any spreadsheets or ready reckoners, please ensure these are updated. If you have any queries regarding their application, please contact your Fund Actuary in the first place.

c) **Loading**: For the avoidance of doubt there should be no added loading applied to the use of the proposed factors, i.e. the loading should be 100% (we are aware that the Fund have used a loading of 125% applicable to the annuity factors currently in place). See also the comment in the Appendix, under Table 2.

d) **Testing**: We would recommend the Fund carries out some testing of the new factors once uploaded, to ensure these are giving reasonable results across a variety of members' ages and both genders. If you have any queries regarding these tests, please contact your Fund Actuary in the first place.

e) **Timing**: The Fund should carefully consider the date at which these factors start to be applied. We recommend that they are applied with immediate effect, subject to issues such as:

- time to upload the new factors on to the Fund's administration system and carry out any necessary testing;
- strain cost quotes already issued (i.e. whether these should be honoured as they stand or replaced with the new factors);
- use of factors in a manner affecting members' benefits (see below);
- strain cost quotes requested but not yet issued to the employer;
- any governance processes required, such as formal approval by Section 95 Officer or Pensions Committee;
- any employer communication requirements, for instance if employers expect any changes to be notified to them before coming into effect.

There is no single correct approach, but the Fund should record (and where necessary communicate) its approach taking account of the above. If you have any queries regarding timing and process issues, please contact your Fund Actuary in the first place.

f) **Impact on members**: The factors do not explicitly affect members' benefit levels in most circumstances, as they are intended to calculate the strain cost payable by the employer on the assumption that the member is retiring with unreduced benefits. However, we are aware that the factors may occasionally be used in a manner which potentially impacts members' benefits, for instance where the employer is considering possible early retirements but its decision will be partly cost-based, or where the member is asked to contribute to their early retirement cost. In such circumstances, these new factors will have an impact on whether the member is granted early retirement, or the cost to the member of that retirement. The impact will depend on the specific circumstances, and if there are any queries please contact your Fund Actuary in the first place.

g) **Ill-health strain costs**: For the avoidance of doubt, the new factors may be used to calculate the strain cost applicable for Tier 1 & Tier 2 ill-health early retirement cases. However, the cost of added service under Tier 1 is not explicitly matched by these factors: the use of the Annuity Factor is likely to be appropriate albeit this does not include the cost of a dependant's pension and so will slightly understate (typically by 10-20%) the cost of that added service.

Note that, all other things being equal, adoption of these factors for ill-health external insurance purposes will affect the premium rate (and hence the commission payments to Hymans Robertson), reflecting the altered strain costs generally arising. We have not carried out analysis identifying the impact for insured employers, so cannot comment on whether this would reduce or increase the premiums and commission.

h) **Exit payment cap**: At the time of writing, the UK Government has proposed and revoked legislation regarding a £95,000 cap on the combined value of a public sector employee's severance package. As we currently understand it, the award of unreduced early retirement benefits is not to be included in the calculation of the cap for Scottish LGPS Funds. As such we have not taken account of this legislation into the proposed factors as we do not believe there will be a shift to standardised early retirement strain cost factors across Scotland. If anything changes in the future in respect of this legislation, please contact your Fund Actuary to verify whether and how the use of these factors is affected.

Professional notes

The paper is not intended for any party other than the Fund, nor for any other purpose than determining early retirement strain cost payments, and Hymans Robertson does not accept any liability relating to any other party or purpose.

This paper is subject to and complies with the following Technical Actuarial Standards set for the actuarial profession:

• TAS 100 (Principles for Technical Actuarial Work), and

• TAS 300 (Pensions).

If there are any queries please direct these to me or your usual Fund Actuary contact in the first place.

Prepared by:-

Douglas Green FFA

21 July 2021

For and on behalf of Hymans Robertson LLP

Appendices

Appendix 1 – Factors for early retirement strain costs

The tables below show the factors required, based on the approach described in this report, for calculating the strain arising on early retirement. We have also shown the existing factors for comparison.

The actual factors to be uploaded to the Fund's administration software are provided in spreadsheet format accompanying this paper.

Table 1: Early Retirement Reduction (ERR) factors

Years to Funded Retirement Date	Early Retirement Reduction	
	Existing Factors	Proposed Factors
0 (or past FRD already)	0.00%	0.00%
1	4.50%	4.17%
2	8.80%	8.03%
3	12.90%	11.63%
4	16.82%	14.96%
5	20.56%	18.05%
6	24.14%	20.93%
7	27.55%	23.61%
8	30.81%	25.57%
9	33.93%	27.38%
10	36.90%	29.08%
11	39.74%	30.68%
12	42.45%	32.21%
13	45.04%	33.66%
14	47.51%	35.04%
15	49.88%	36.37%

As per our Instruction Manual:

- Different Early Retirement Reductions may apply for a member's different tranches of benefits, based on the Funded Retirement Date (FRD) as defined in the Manual.

- ERR should be interpolated based on the number of years and complete months before FRD.

Table 2: Annuity factors

Age Next Birthday	Existing Factors		Proposed Factors	
	Male Factors	Female Factors	Male Factors	Female Factors
51	20.01	21.39	23.06	24.94
52	19.76	21.18	22.76	24.78
53	19.48	20.93	22.47	24.59
54	19.14	20.64	22.16	24.38
55	18.76	20.29	21.83	24.13
56	18.36	19.93	21.37	23.66
57	17.95	19.54	20.89	23.16
58	17.53	19.15	20.40	22.65
59	17.10	18.74	19.91	22.12
60	16.66	18.33	19.40	21.59
61	16.23	17.91	18.88	21.05
62	15.78	17.49	18.36	20.49
63	15.33	17.05	17.84	19.94
64	14.88	16.60	17.32	19.38
65	14.43	16.15	16.80	18.82

The Annuity Factor to be used is that applicable to the member's age at the **next** birthday.

IMPORTANT NOTE: We understand that the existing factors are currently used with a 125% loading, and for ease of comparison the above table shows the existing annuity factors with that loading included. However, the proposed factors shown above, and in the accompanying spreadsheet, are intended for use with a 100% loading: see part (c) under "Implementation".